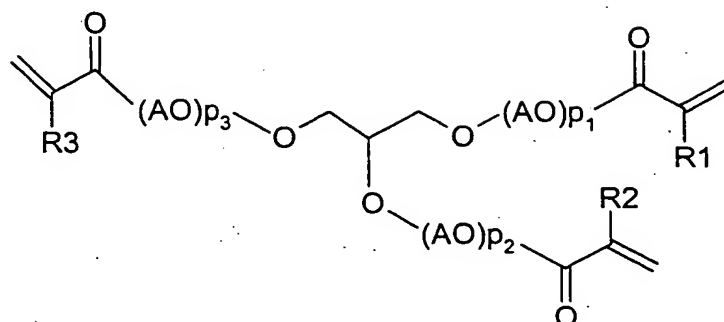


We claim:-

1. An ester F of the formula Ia



where AO is for each AO independently EO or PO,

where EO is O-CH<sub>2</sub>-CH<sub>2</sub>-,

PO is at each instance independently O-CH<sub>2</sub>-CH(CH<sub>3</sub>)- or O-CH(CH<sub>3</sub>)-CH<sub>2</sub>-

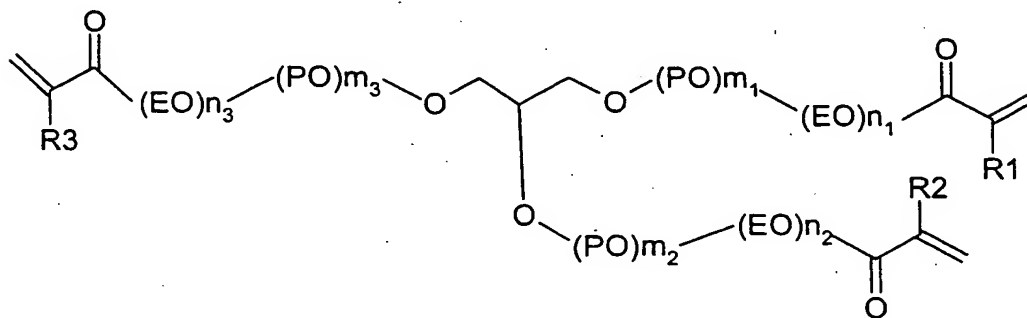
p<sub>1</sub> + p<sub>2</sub> + p<sub>3</sub> is 3, 4 or 5,

R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are independently H or CH<sub>3</sub>.

2. An ester F as per claim 1, wherein AO is EO.

3. An ester F as per claim 1, wherein at least one AO is PO and at least one further AO is EO.

4. An ester F of the formula Ib



where EO is O-CH<sub>2</sub>-CH<sub>2</sub>-

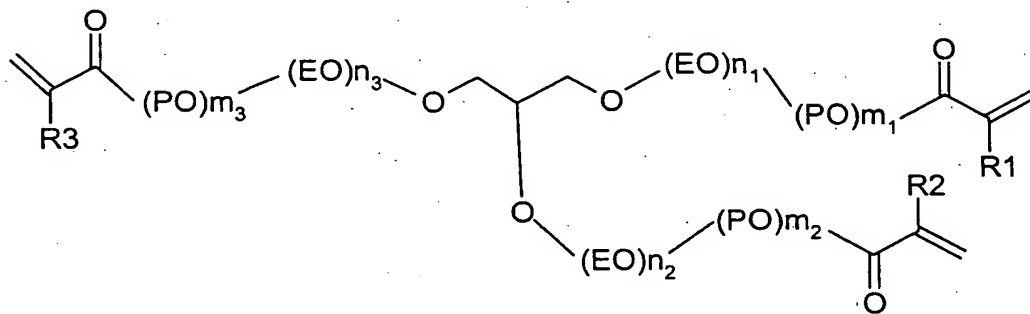
PO is at each instance independently O-CH<sub>2</sub>-CH(CH<sub>3</sub>)- or  
O-CH(CH<sub>3</sub>)-CH<sub>2</sub>-

$m_1 + m_2 + m_3 + n_1 + n_2 + n_3$  is 3, 4 or 5,

$m_1 + m_2 + m_3$  is 1, 2, 3, or 4,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> are independently H or CH<sub>3</sub>.

5. An ester F of the formula Ic



where EO is O-CH<sub>2</sub>-CH<sub>2</sub>-

PO is at each instance independently O-CH<sub>2</sub>-CH(CH<sub>3</sub>)- or  
O-CH(CH<sub>3</sub>)-CH<sub>2</sub>-

$m_1 + m_2 + m_3 + n_1 + n_2 + n_3$  is 3, 4 or 5,

$m_1 + m_2 + m_3$  is 1, 2, 3, or 4,

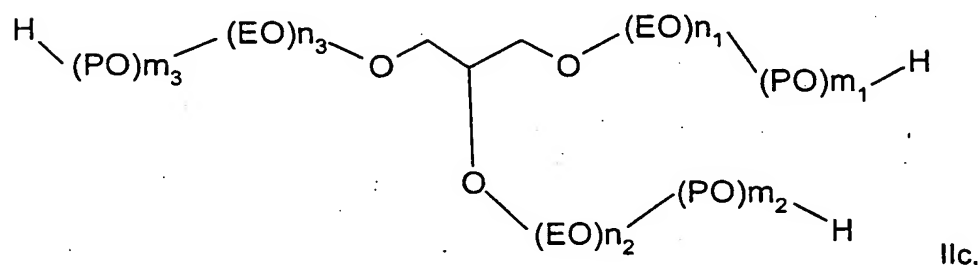
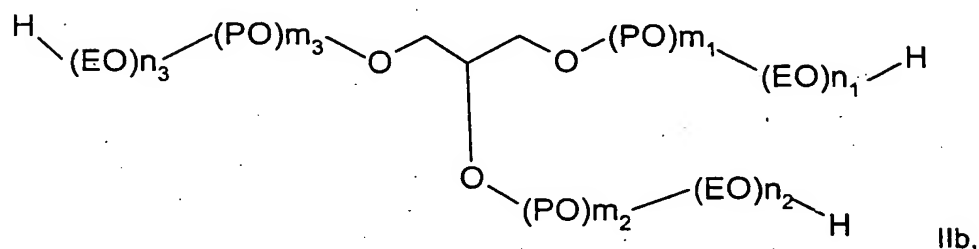
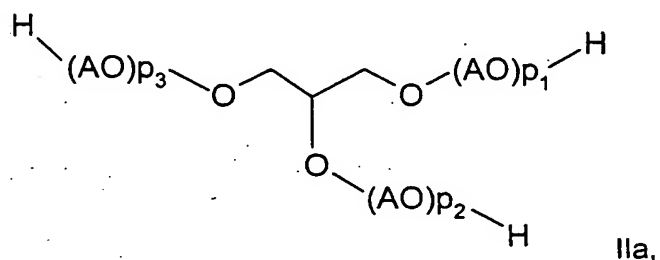
R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> are independently H or CH<sub>3</sub>.

6. An ester F as per any of claims 1 to 5, wherein  $m_1 + m_2 + m_3 + n_1 + n_2 + n_3$  or  $p_1 + p_2 + p_3$  is equal to 3 or 5.

7. An ester F as per any of claims 1, or 3 to 6, wherein 3 POs are present in total.

8. An ester F as per any of claims 1, or 3 to 7, wherein at least one PO is present in each of the 3 alkoxy chains of glycerol.

9. A process for preparing an ester F as per any of claims 1 to 8 of alkoxyated glycerol of the formula IIa, IIb or IIc



where AO, EO, PO,  $n_1$ ,  $n_2$ ,  $n_3$ ,  $m_1$ ,  $m_2$ ,  $m_3$ ,  $p_1$ ,  $p_2$  and  $p_3$  are each as defined in any of claims 1 to 8,

with (meth)acrylic acid, comprising the steps of

- a) reacting alkoxyated glycerol with (meth)acrylic acid in the presence of at least one esterification catalyst C and of at least one polymerization inhibitor D and optionally also of a water-azeotroping solvent E to form an ester F,
- b) optionally removing from the reaction mixture some or all of the water formed in a), during and/or after a),
- f) optionally neutralizing the reaction mixture,

- h) when a solvent E was used, optionally removing this solvent by distillation, and/or
- i) stripping with a gas which is inert under the reaction conditions.

5 10. A process as claimed in claim 9, wherein

- the molar excess of (meth)acrylic acid to alkoxyated glycerol is at least 3.15:1 and
- the optionally neutralized (meth)acrylic acid present in the reaction mixture after the last step substantially remains in the reaction mixture.

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11. A process as claimed in either of claims 9 and 10, wherein the (meth)acrylic acid is not more than 75% by weight removed from the reaction mixture obtained after the last step, which reaction mixture contains ester F.

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12. A process as claimed in any of claims 9 to 11, wherein the reaction mixture obtained after the last step, which contains ester F, has a DIN EN 3682 acid number of at least 25 mg of KOH/g.

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13. A process as claimed in any of claims 9 to 12, wherein the reaction mixture obtained after the last step, which contains ester F, has a (meth)acrylic acid content of at least 0.5% by weight.

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14. A process as claimed in any of claims 9 to 13, wherein the molar ratio of (meth)acrylic acid to alkoxyated glycerol in reaction a) is at least 15:1.

15. A process for preparing a crosslinked hydrogel, comprising the steps of

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k) polymerizing an ester F as per any of claims 1 to 8, with (meth)acrylic acid, with optionally additional monoethylenically unsaturated compounds N and optionally also at least one further copolymerizable hydrophilic monomer M in the presence of at least one free-radical initiator K and optionally of at least one grafting base L,

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l) optionally postcrosslinking the reaction mixture obtained from k),

m) drying the reaction mixture obtained from k) or l), and

n) optionally grinding and/or sieving the reaction mixture obtained from k), l) or m).

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16. A process for preparing a crosslinked hydrogel, comprising steps a) to i) as per any of claims 9 to 14 and additionally

- 5 k) polymerizing the reaction mixture from one of stages a) to i) if performed, with optionally additional monoethylenically unsaturated compounds N and optionally also at least one further copolymerizable hydrophilic monomer M in the presence of at least one free-radical initiator K and optionally of at least one grafting base L,
- l) optionally postcrosslinking the reaction mixture obtained from k),
- m) drying the reaction mixture obtained from k) or l), and
- 10 n) optionally grinding and/or sieving the reaction mixture obtained from k), l) or m).
17. Polymer obtainable according to a process as per either of claims 15 and 16.
- 15 18. Crosslinked hydrogel containing at least one hydrophilic monomer M in copolymerized form crosslinked with an ester F as per any of claims 1 to 8.
19. Crosslinked hydrogel containing at least one hydrophilic monomer M in copolymerized form crosslinked with a reaction mixture which contains ester F and is obtainable according to a process of claims 9 to 13.
- 20 20. Use of a polymer as per any of claims 17 to 19 in hygiene articles, packaging materials and in nonwovens.
- 25 21. A composition of matter comprising
- from 0.1% to 40% by weight of at least one ester F as per any of claims 1 to 8 and (meth)acrylic acid,
  - 0.5 – 99.9% by weight of at least one hydrophilic monomer M,
  - 0 – 10% by weight of at least one esterification catalyst C,
  - 30 - 0 – 5% by weight of at least one polymerization inhibitor D, and
  - 0 – 10% by weight of a solvent E,
- with the proviso that the sum total is always 100% by weight.
- 35 22. A composition of matter as per claim 21, further comprising
- a diluent G ad 100% by weight.
23. Crosslinked hydrogel obtainable from a composition of matter as per claim 21 or 22 and additionally

- l) optionally postcrosslinking the reaction mixture obtained,
- m) drying the reaction mixture obtained directly or from l), and
- n) optionally grinding and/or sieving the reaction mixture obtained directly or from l) or m).

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24. Use of a reaction mixture obtainable according to any of claims 9 to 13 or of a composition of matter as claimed in claim 21 or 22

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- as a free-radical crosslinker of water-absorbing hydrogels,
- as a starting material for preparing polymer dispersions,
- as a starting material for preparing polyacrylates,
- as a paint raw material, or
- as a cement additive.

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25. Crosslinked hydrogel having a saponification index of less than 10, preferably less than 8, and especially less than 5.

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26. Crosslinked hydrogel as per any of claims 17, 18, 19 or 23 having a saponification index of less than 11, preferably less than 10, more preferably less than 8, and especially less than 5.

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27. Crosslinked hydrogel as per any of claims 17, 18, 19, 23, 25 or 26 having a residual crosslinker content of less than 10 ppm, preferably less than 8 ppm, more preferably less than 5 ppm.

28. Use of an ester F as per any of claims 1 to 8 for preparing hydrogel-forming polymers capable of absorbing aqueous fluids.